

TOYOTA · POWERTRAIN

P1127

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1127 · Toyota

ETCS Actuator Power Source Circuit

P1127 on a Toyota means the engine control module has detected a problem with the power source circuit feeding the electronic throttle control system actuator, which is the electric motor that opens and closes the throttle plate. The computer monitors the voltage and current on the actuator's power feed and flags this code when the circuit does not behave as expected, often because of a blown fuse, a faulty relay, or damaged wiring.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Toyota specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light and often the vehicle stability control (VSC) or traction control warning light
- Reduced engine power or a limp-home mode where the throttle responds sluggishly or not at all
- The engine may idle erratically or stall immediately after starting
- A noticeable lack of acceleration when pressing the accelerator pedal
- In some cases, no symptoms besides the warning light, especially if the fault is intermittent
- The gas pedal may feel unresponsive or require unusually heavy pressure to achieve normal acceleration

Common causes, most likely first

- 1 Blown fuse in the engine compartment fuse box that supplies power to the electronic throttle control system actuator
- 2 Faulty electronic throttle control system relay or a relay that has developed high resistance in its contacts
- 3 Corroded, loose, or damaged wiring between the battery, fuse box, relay, and throttle actuator connector
- 4 Poor ground connection for the throttle actuator or the engine control module
- 5 Failed throttle body assembly where the actuator motor windings are open or shorted
- 6 Water intrusion or corrosion inside the throttle body connector or the engine control module connector
- 7 A weak or failing battery that cannot maintain stable voltage under load, causing the module to set the code



How to diagnose and fix it

- 1 Check all fuses related to the electronic throttle control system in the under-hood fuse box and replace any that are blown, then clear the code and retest
- 2 Inspect the throttle body connector and the engine control module connector for corrosion, loose pins, or water intrusion, and clean or repair as needed
- 3 Test the electronic throttle control system relay by swapping it with an identical known-good relay and see if the code returns
- 4 Measure voltage and resistance on the power source circuit at the throttle actuator connector with the key on, comparing to factory specifications
- 5 Check the ground circuit for the throttle actuator and engine control module using a voltage drop test to confirm a clean, low-resistance path
- 6 Perform a wiggle test on the wiring harness while monitoring live data for the throttle actuator power supply to catch intermittent faults
- 7 If all wiring and power supply checks pass, replace the throttle body assembly and perform the required throttle relearn procedure with a scan tool

Before you replace the throttle body

- A weak battery or a failing alternator can set P1127 on a Toyota because the throttle actuator power circuit is sensitive to voltage sags, so always load-test the battery and check charging voltage before condemning the throttle body.
- The same code can be stored by a relay that clicks but has burned contacts, so swapping the relay with a known-good one is a faster and cheaper test than probing the entire harness first.
- Corrosion inside the throttle body connector is a common missed cause on older Toyota models, especially in regions with road salt, and it can mimic a failed actuator even when the motor tests good.
- P1127 does not always mean the throttle body itself is bad; many vehicles come in with this code after a fuse was replaced but the underlying short that blew it was never found, so the fuse blows again within days.
- On some Toyota models, a loose or corroded ground strap between the engine and the chassis can cause this code along with other unrelated electrical gremlins, so check all main grounds before chasing the throttle circuit.

Can I keep driving with P1127?

You can usually drive the vehicle to a repair shop if the throttle still responds, but avoid heavy acceleration and highway driving because the engine may enter limp-home mode without warning. If the throttle is completely unresponsive or the engine stalls repeatedly, stop driving and have the vehicle towed to prevent a dangerous loss of power.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter with voltage and resistance functions
- Test light or fused jumper wire
- Socket set and trim removal tools
- Factory service information or wiring diagram for the specific Toyota model

Reading P1127

- P** Powertrain: engine, transmission and emissions.
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- 1** Manufacturer-specific code (Toyota): its meaning depends on the make.
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- 1** Fuel and air metering.
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- 27** The exact fault within that area.

Often seen with

P1128 Long Term Fuel Trim Bank 1 System Too Lean · **P1129** Long Term Fuel Trim Bank 2 System Too Rich · **P1128** Throttle Control Motor Lock · **P1129** Electric Throttle Control System · **P1128** MAP Lower Than Expected · **P1129** MAP Higher Than Expected · **P1128** HO2S Bank 1 Sensor 1 Signals Swapped In Key On Engine Runnin · **P1129** Downstream HO2S Sensors Swapped · **P1128** Long Term Fuel Trim Multiplicative Air System High · **P1128** MAP Lower Than Expected · **P1129** MAP Higher Than Expected · **P1128** Upstream Heated Oxygen Sensor Signals Reversed · **P1129** Downstream Heated Oxygen Sensor Signals Reversed · **P2101** Throttle Actuator Control Motor Circuit Range/Performance · **P2103** Throttle Actuator Control Motor Circuit High · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/toyota-p1127/>

